U.S. DEPARTMENT OF COMMERCE PAT	ATTORNEY'S DOCKET NUMBER BU-098XX									
TRANSMITTAL LETTER	U.S. APPLICATION NO. (If known, see 37 CFR 1.5)									
DESIGNATED/ELECTI	8015444									
CONCERNING A SUMBIS	10/511644									
INTERNATIONAL APPLICATION NO.	INTERNATIONAL FILING DATE	PRIORITY DATE CLAIMED								
PCT/US03/11166	18 April 2002									
TITLE OF INVENTION										
HYDROGEN SEPARATION USING OXYGEN ION-ELECTRON MIXED CONDUCTION MEMBRANES										
APPLICANT(S) FOR DO/EO/US										
Srikanth Gopalan and Uday Pal										
	tates Designated/Elected Office (DO/EO/US) th	e following items and other information:								
1. This is a FIRST submission of items concerning a filing under 35 U.S.C. 371.										
2. This is a SECOND or SUBSEQUENT submission of items concerning a filing under 35 U.S.C. 371.										
3.	examination procedures (35 U.S.C. 371(f)). The su	ubmission must include items (5), (6), (9) and								
(21) indicated below.										
4. The US has been elected. (Article 31).										
5. X A copy of the International Application as filed (35 U.S.C. 371(c)(2))										
a. is attached hereto (required only if not transmitted by the International Bureau).										
b. X has been communicated by the International Bureau.										
c. is not required, as the application was filed in the United States Receiving Office (RO/US).										
6. An English language translation of the International Application as filed (35 U.S.C. 371(c)(3)).										
a. is attached hereto.										
b. had been previously submitted under 35 U.S.C. 154(d)(4).										
	national Application under PCT Article 19 (35 U.S	S.C. 371(c)(3))								
a. \square are attached herewith (required only if not transmitted by the International Bureau).										
b. X have been communicated by	•	,								
c. have not been made; however, the time limit for making such amendments has NOT expired.										
d. have not been made and will										
_		35 U.S.C. 371(c)(3)).								
	8. An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)). 9. An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)). (Unsigned)									
*	ernational Preliminary Examination Report under F	PCT Article 36 (35 ILS C 371(c)(5))								
· · · · · · · · · · · · · · · · · · ·	Andronal Fremmary Examination Report under 1	C1 Afficie 30 (33 0.3.C. 371(c)(3)).								
' Items 11. to 20. below concern document	(s) or information included:									
11.										
	g. A separate cover sheet in compliance with 37 C	FR 3.28 and 3.31 is included.								
13. A preliminary amendment.	,									
14. An Application Data Sheet under 37 C	EFR 1.76.									
15. A substitute specification.										
16. A power of attorney and/or change of	address letter									
17. A computer readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 37 U.S.C. §1.821-1.825										
18. A second copy of the published international application under 35 U.S.C. 154(d)(4).										
19. A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4).										
20. Other items or information:										
20. Unior nems or information:	·									

ALCULATIONS	U.S. APPLICATION NO. (If know	n, see 37 CFR 1.5)	INTERNATIO	NAL APPLICATION NO		ATTORNEY'S DOC	ATTORNEY'S DOCKET NUMBER	
BASIC NATIONAL PEE (37 CPR 1.492 (c)) (1) - (5)): Neither international preliminary examination fee (37 CPR 1.482) nor international search Regort not prepared by the EPO or JPO \$1,110.00 International Preliminary examination fee (37 CFR 1.482) not paid to USPTO out International Search Report prepared by the EPO or JPO \$950.00 International preliminary examination fee (37 CFR 1.482) not paid to USPTO USPTO Use International search fee (37 CFR 1.482) not paid to USPTO Use International search fee (37 CFR 1.4845)(2/2)) paid to USPTO \$790.00 International preliminary examination fee paid to USPTO (37 CFR 1.482) but all claims did not satisfy provisions of PCT Article 33(1)-(4) \$750.00 International preliminary examination fee paid to USPTO (37 CFR 1.482) and all claims satisfied provisions of PCT Article 33(1)-(4) \$100.00 Surcharge of \$130.00 for furnishing the cash or declaration later than 20 30 \$-0- months from the earliest claimed priority date (37 CFR 1.492(e)) CLAIMS NUMBER FILED NUMBER FILED NUMBER EXTRA RATE Total claims 7 20 = 0-0 X\$18.00 \$-0- Independent claims 7 20 = 0-0 X\$18.00 \$-0- MULTIPLE DEPENDENT CLAIM(8) (if applicable) \$1530.00 \$-0- TOTAL OF ABOVE CALCULATIONS = \$100.00 Applicant claims small entity status. See 37 CFR 1.27. The fees indicated above are reduced by 1/2. Processing fee of \$130.00 for furnishing the English translation later than 20 30 \$-0- TOTAL OF ABOVE CALCULATIONAL FEE = \$50.00 Processing fee of \$130.00 for furnishing the English translation later than 20 30 \$-0- TOTAL DEED FORDER FOR CALCULATIONAL FEE = \$50.00 Processing fee of \$130.00 for furnishing the English translation later than 20 30 \$-0- TOTAL DEED FORDER FOR CALCULATIONAL FEE = \$50.00 Processing fee of \$130.00 for furnishing the English translation later than 20 \$-0- TOTAL DEED FORDER FOR CALCULATIONAL FEE = \$50.00 Processing fee of \$130.00 for furnishing the English translation later than 20 \$-0- TOTAL PREES ENCLOSED = \$50.00 Amount to be \$-0- TOTAL PREES ENCLOSED = \$50.00 Aduptive are an appropriate	1 10/51	1644	PCT/US03/11166			BU-098XX		
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USPTO but International Search Report prepared by the EPO or IPO \$950.00 International preliminary examination fee (37 CFR 1.482) not paid to USPTO \$790.00 International preliminary examination fee paid to USPTO (37 CFR 1.482) but all claims did not satisfy provisions of PCT Article 33(1)-(4) \$750.00 International preliminary examination fee paid to USPTO (37 CFR 1.482) and all claims existified provisions of PCT Article 33(1)-(4) \$100.00 ENTER APPROPRIATE BASIC FEE AMOUNT = \$100.00 Surcharge of \$130.00 for furnishing the coath or declaration later than □ 20 □ 30 \$ -0- months from the earliest claimed priority date (37 CFR 1.492(e)). CLAIMS NUMBER FILED NUMBER EXTRA RATE Total claims 7 - 20 = 0 X \$18.80 \$ -0- Independent claims 1 - 3 = 0 - X \$88.00 \$ -0- MULTIPLE DEPENDENT CLAIM(S) (if applicable) + \$3500.00 \$ -0- MULTIPLE DEPENDENT CLAIM(S) (if applicable) + \$4500.00 \$ -0- TOTAL OF ABOVE CALCULATIONS = \$100.00 Applicant claims small entity status. See 37 CFR 1.27. The fees indicated above are reduced by 1/2. Processing fee of \$130.00 for furnishing the English translation later than □ 20 □ 30 For for recording the enclosed assignment (37 CFR 1.492(f)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 1.29(2)). TOTAL NATIONAL FEE \$50.00 For for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 1.26(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 1.26(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 1.26(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 1.26(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 1.26(h)). The assignment must be accompanied by an appropriate cover sheet is enclosed. Description of the sheet is enclosed. Total Please charge my Deposit Account No in the amount of \$ to cover the above fees. A duplicate c	nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO							
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Amount to be refunded: charged: \$ a. \[\text{ A check in the amount of \$\\$50.00\$ to cover the above fees is enclosed.} \] b. \[\] Please charge my Deposit Account No. \[\] in the amount of \$\\$ to cover the above fees. A duplicate copy of this sheet is enclosed. c. \[The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. \[23-0804 \] . A duplicate copy of this sheet is enclosed. NOTE: Where an appropriate time limit under 37 CFR 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the international application to pending status. [X] Customer Number 207	accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property							
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WEINGARTEN, SCHURGIN, GAGNEBIN & LEBOVICI LLP Ten Post Office Square Boston, Massachusetts 02109 United States Telephone: (617) 542-2290 Fax: (617) 451-0313 Attorney Signature: Deb. 18, 2004	[X] Customer Num	ber 207		which is associate	d with the Law Fin	m of:		
Boston, Massachusetts 02109 United States Telephone: (617) 542-2290 Fax: (617) 451-0313 Attorney Signature: Deb. 18, 2004	WEINGARTEN, SCHURGIN, GAGNEBIN & LEBOVICI LLP							
United States Telephone: (617) 542-2290 Fax: (617) 451-0313 Attorney Signature: Det. 18, 2004								
Attorney Signature: Holling C, Leve Date: Det. 18, 2004				•	10CH3 02107			
Attorney Signature: Holleday C, Leve Date: Det. 18, 2004								
Attorney Name: Holliday C. Heine, Ph.D. Registration No: 34,346								
	Attorney Name: Holliday C. Heine, Ph.D. Registration No: 34,346							

Page 2 of 2 Submit in Triplicate HCH/raw 312536-1